

**25858 to 25860—Continued.****25858 and 25859—Continued.**

the Isthmus twice. The yellow clay still impresses my memory with its stickiness and with its similarity to the yellow clays of Mount Canlaon (Negros), where I think perhaps I have seen the most riotous growth of *Palasan*—our best rattan. As I remember it, the rainfall on the Isthmus is probably about 2,400 to 2,500 mm. (94 to 98 inches). If it is less than 2,000 mm. (about 79 inches), I think rattans would not do much, although at Perak the precipitation is less and they raise some good, long-jointed canes.

"For environment the rattans want jungle and plenty of it. My remembrance of the zone is that the hills were unbroken jungle. Calamus must have a thick mass of medium-sized vegetation to scramble over.

"There is a single feature of Calamus culture which differentiates it positively from every other sylvan product with which I am acquainted. It is (if there be any such thing) an exception to the law of selection. All are fit to survive under conditions where all other species except those fortuitously well placed would succumb. No amount of crowding or shading seems to choke off a young rattan. Its progress is tedious under adverse conditions, but it struggles up till it gets light and then nothing but the bolo or cutlass can hold it back. In planting practice, this gives it a supreme advantage over most plants. Further, it eliminates the bugbear and expense of jungle clearing, a matter which is to be heavily reckoned. I am not prepared to give a thesis on rattan culture, but close observation of its behavior in our smooth bamboo (cana boho), which makes a thicket impervious to any animal except a wild pig and which is voracious enough to choke out every other kind of vegetable life except Calamus, inspires me with exceptional credulity to believe it can be grown more nearly as a purely spontaneous crop than any economic product known, not excepting common timber trees.

"I am not advocating complete neglect; removal of a fallen limb or a rank herbaceous weed, or an occasional slash with a bolo, would probably accelerate growth, but it is not an essential factor to success. The best commercial rattans, both Calamus and *Damonorpas*, are spiny as hedgehogs and immune from the raids of even deer. Best of all, they are renescent from the butt, and the same land and same planting may be cut over in six or seven years for a second time. There are two very serious drawbacks to a very general adoption of rattan planting for profit. One, their shy fruiting habits and consequent scarcity of seed; the other, slow development.

"The fruits are eaten by birds, and seeds can only be obtained where they are concealed from the birds. All the species, I fancy, are, as seeds, of fugitive vitality. This is not only my own limited experience, but is evidently that of European seedsmen—those who are specialists in palm seeds, and who rarely offer them for sale. As most of the species until they reach the sprawling age are remarkably ornamental, far more so than most palms, I can only explain their absence from catalogues of tropical ornamentals upon these grounds.

"I can give you no idea of the time required to yield a crop. I only know that the crop is slow, very slow. The renewal crop is rapid. I have seen canes on cut-over lands which had been stripped four years before. I think in five or six years at most, and on poor lands, a second crop can be depended upon. A seedling crop, perhaps, in 10 years." (*Lyon.*)

**25860. LIVISTONA WHITFORDII BECCARI.**

"This is far more compact, bushy, and ornamental than *Livistona rotundifolia*." (*Lyon.*)

*Distribution.*—A native of the province of Tayabas in the island of Luzon.